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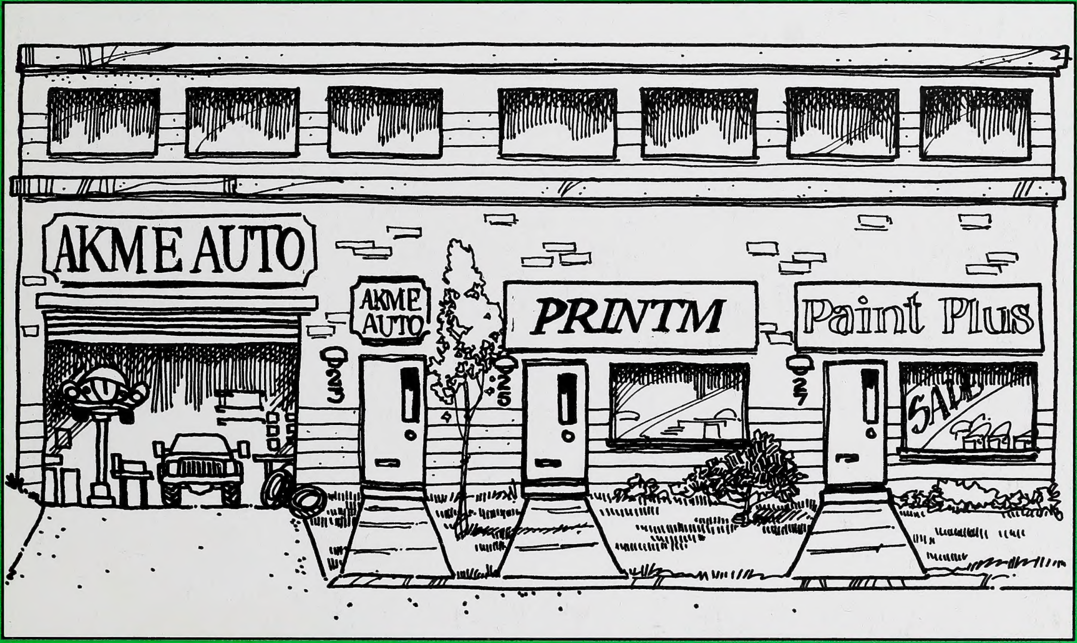
Occupational Health and Safety Manual

FOR SMALL BUSINESS

PART TWO
Planning and Procedures



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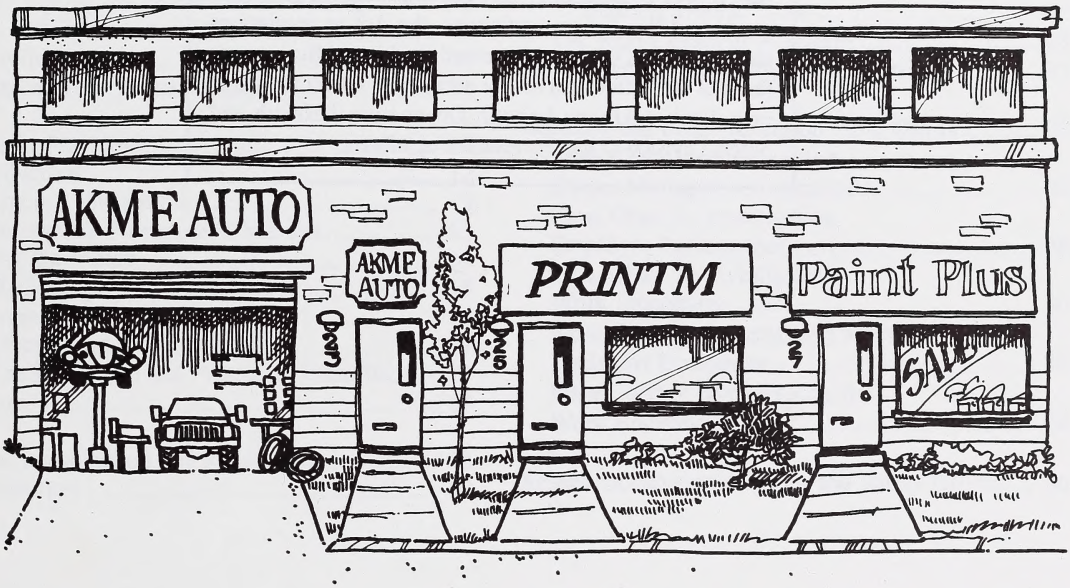

December 1993

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This publication does, on occasion, make reference to the Occupational Health and Safety Act and its regulations. In the event of a discrepancy between statements in this publication and the Act or regulations, the Act or regulations shall prevail. Opinions expressed in this publication are those of the writers and do not necessarily reflect the views or policy of Alberta Labour, Occupational Health and Safety Division or the Government of Alberta.

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Introduction

Small business is an important sector of Canada's economy. You and your fellow owner-managers create more than two out of every three new jobs. You also are responsible for about four-fifths of the country's industrial innovations. In Alberta, your sector represents about 97% of the province's businesses and employs about 500,000 workers. Furthermore, with the world's advanced economies shifting from the sale of goods to the sale of ideas and services, your importance as a source of innovation is going to increase.

Small business, however, has a problem to overcome. Businesses like yours are responsible for more than their share of Alberta's lost time and fatal accidents. In 1987 and 1988, businesses with fewer than 100 employees accounted for 42% of the total man years worked in Alberta. However, they accounted for 52% of lost time claims filed with the Workers' Compensation Board (WCB).

Statistics like these are not unique to Alberta. Studies show they are similar for other provinces and other industrialized countries. This has led many health and safety professionals to question why, and to try to find out what can be done about it. Some of these people even question your concern for your employees' well-being. However, anyone who understands the nature of owner-managed business knows that your employees are important to you. The relationship between you and your employees may be similar to that of a family unit. In fact, many of you have family members in the business.

One reason for your poor accident record likely is a lack of resources. You don't have the time, money or staff big businesses have to allocate to their health and safety programs. Bringing in enough money to pay your bills is in itself a constant challenge. You are personally involved in all the activities needed to keep the business functioning. You have little time or money, therefore, to spend exclusively on health and safety matters. Big businesses have health and safety professionals on staff, or can afford to hire them as consultants. Instead, you are your own health and safety manager, and what you need is some basic information on how to get started. This Manual is a ready reference, easily understood by a non-professional. It explains how to set up and maintain a cost-effective health and safety program.

Health and safety practices have a major effect on your business's profitability. They are an important element of what is called loss control (or loss prevention). A good loss prevention program is essential if your business is to provide high quality products and services at the lowest possible cost. This three-part Manual is designed to help you with such a program. It provides you with the information you need to develop, install and maintain cost-effective health and safety practices that work.

The Manual is based on materials prepared by the Canadian Organization of Small Business Inc., through a grant from the Alberta Occupational Health and Safety Heritage Grant Program. Ryan Loss Control Consultants Ltd. provided the technical input and Akiko Ogata did the illustrations. Valuable advice on the development of the Manual was provided by a Project Committee. Members of this Committee included representatives from:

- Alberta Alcohol and Drug Abuse Commission
- Alberta Chamber of Commerce
- Alberta Construction Association
- Alberta Occupational Health and Safety
- Canadian Organization of Small Business Inc.
- Christian Labour Association of Canada
- Hotel and Restaurant Employees and Bartenders Union
- Workers' Compensation Board, Alberta
- Workers' Health Centre

The Manual comprises three separate booklets. Part One presents a basic overview of occupational health and safety issues and principles. Part Two moves on to more detailed planning and procedures to prevent occupational health and safety problems. Part Three takes a more comprehensive look at management responsibilities, the involvement and training of employees, and some broader employee health issues.

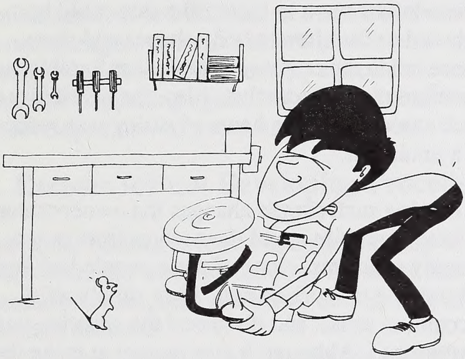
All three parts of the Manual provide guidance to establish an effective occupational health and safety program. The Manual contains information on several subjects (each of these is a chapter in the Manual):

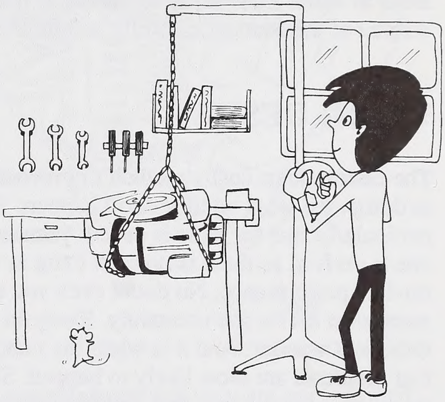
Part One – Getting Started
- Controlling Costs by Preventing Losses
- Hazard Identification, Elimination and Control
- Hazardous Materials
- Personal Protective Equipment
- Workers' Compensation Claims
- Sources of Information and Help

Part Two – Planning and Procedures
- Developing and Implementing Standard Work Procedures
- Emergency Planning
- Accident Investigation and Reporting
- Accident and Loss Prevention Flow Charts

Part Three – Working Together
- Management Responsibilities
- The Employee
- Employee Training and Development
- Employee Health

Developing and Implementing Standard Work Procedures





"Anything that can go wrong, will."

"The probability of something going wrong is inversely proportional to its desirability."

INTRODUCTION

Have you ever felt that one of these sayings applies to your business? If so, it could be due to the fact that work was not being done the way you expected it to be. As a result, an accident occurred that could, or should, have been prevented. When faced with such a situation, you have to put your regular business on hold while you deal with its consequences. And this costs you time and money.

When something goes wrong, your initial reaction may be to blame your employees. However, most of the time you will find it is not their fault. Instead, it's the fault of the work system; and final responsibility for the work system is yours. It is your job to constantly be looking for better, more economical, and safer ways to get the work done. Only by working smarter, not harder, can you stay ahead of your competitors. And to do this, you must seek ways that will allow your employees to perform their work without making costly errors.

This chapter of the Manual shows how to design the work so the job gets done right the first time. This means doing it safely, productively, and efficiently. The emphasis is on how to prevent errors rather than on how to correct them after they're made. And error prevention starts with questions like "What if ...?", or

"What could happen here?". Always keep in mind the phrase known as Murphy's Law: "If anything can go wrong, it will." For example, suppose you own a food store. Consider what would happen if your freezer motor suddenly quit. What would, or could, you do? What if your only butcher sliced off a finger? What would be the consequences? Could your business stand to suffer these kinds of losses? If not, read this chapter of the Manual carefully and follow its advice.

WORK DESIGN

The easiest, least costly method of preventing errors is to design the work so they don't happen. This is particularly true for what is called "human error". No one is perfect, so there is no such thing as totally error-free performance. No doubt even you can't keep your mind on the job constantly. Every so often, your mind will wander. And it is when the mind wanders that accidents are most likely to happen. So, design the work in such a way that you provide the maximum possible protection from human error. Remember, one serious human error can put you out of business.

Enlist the help of your employees when designing the work. The person actually doing the work usually knows the easiest and safest way to do it. Input from such people can not only help you design the work; it also helps assure their willingness to do it properly.

When designing the work, make sure the work flow requires the least possible effort for the greatest possible output. Always look for ways of doing the work with the least effort or strain possible. Where feasible, have mechanized aids to help lift heavy objects. Also, make sure your equipment is designed for easy and comfortable operation.

Here are some examples of design changes that have helped eliminate potential loss-causing situations:

1. A brake press in a sheet metal shop was fitted with two recessed "ON" buttons. One was on the right side of the press, the other on the left. To run the press, the operator had to push both buttons at the same time. This eliminated the possibility of the operator's hands being under the brake when it closed.
2. A paint retailer purchased a small portable conveyor for the shipping and receiving area. This greatly speeded up the loading and unloading of trucks. It also reduced the possibility of workers straining their backs from having to carry heavy cartons of paint cans over a distance.
3. The owner of a food store purchased special protective gloves for the butcher to wear when cutting meat. These protected the butcher from possible injury due to human error. They also may have saved the owner-manager from losing a lot of time and money if the store's only butcher was off work due to a serious injury.
4. The owner of a telephone soliciting company paid a few dollars extra to buy chairs that could be adjusted to fit different body shapes and sizes. These made the employees more comfortable, and therefore more productive. Also, the possibility of back strain from long hours of sitting was reduced to a minimum.

By making such simple changes the owner-managers in these examples saved themselves from potentially costly problems. None of these people had any special training in work design. They simply used some common sense, and discussed the situation with their employees. Although it cost money to make the changes, in each instance the improved morale and productivity fully justified the expense.

I think it needs a guidance system.

WORK PROCEDURES

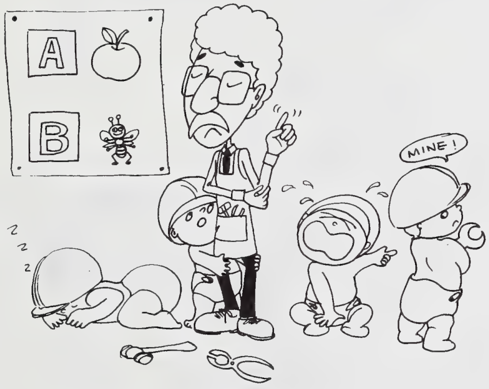
You should always try to design a job so no serious accidents or costly errors occur. Unfortunately, this is not always possible. But the probability of it happening can be reduced by having a standard procedure for doing the work. This portion of the chapter shows you how to develop procedures which maximize safety. As a bonus, following these procedures will also increase your employees' productivity and the quality of their work.

A lot of health and safety legislation has been developed in response to accidents that have already happened. And many of the procedures used by big business have been developed to help prevent another similar accident or loss. But, as a small business owner-manager, you can't afford to wait until an accident occurs and then develop a procedure to try to prevent it happening again. Your procedures need to be developed now to avoid future accidents.

A. Excuses for not Developing Procedures

Few small business owner-managers develop or follow standard work procedures. There are many reasons (excuses, really) for this. Some of the more common ones are:

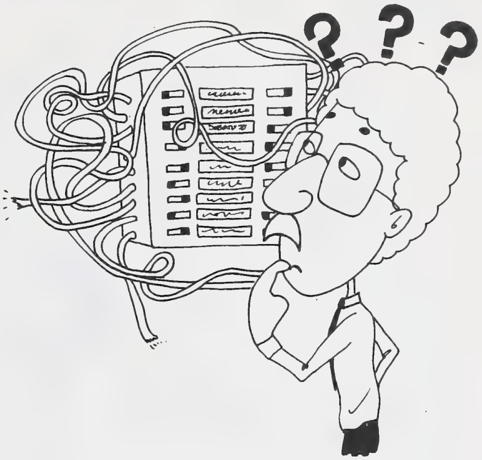
1. "My employees are adults who can look after themselves. I wouldn't have hired them if they weren't. I don't have time to babysit them."



My employees are adults. I don't have time to babysit them.

Employees don't want to be babied and constantly told what to do. They want to be treated as adults who don't need constant supervision. But sometimes even "adults" need some guidance. Workers' Compensation Board statistics show that over 500,000 people are injured on the job in this country each year. And the statistics also show that those working in small businesses have a high percentage of these injuries.

2. "These people are professionals. Who am I to question them on how they do their work?"



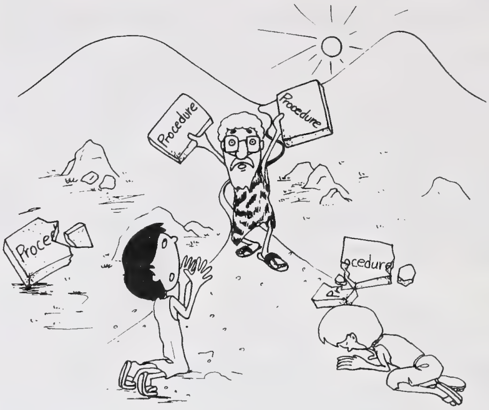
Some owner-managers feel they are not qualified to question their employees about the way they're doing their work. For example, if you know nothing about electrical wiring, you're not going to try to tell your electrician how to hook up an electrical panel. But the fact employees have some special training does not mean they do not have some bad work habits. Nor does it mean they are not taking dangerous shortcuts. In our world of rapid change, what your tradespeople were taught yesterday may be obsolete today. If you want your business to be profitable, you can't allow yourself or your employees to live in the past. You must constantly be looking for newer and better ways to get the work done. Enlist the help of your employees; they have much to offer if asked.

3. "You can't teach an old dog new tricks. Besides, they've done it that way for 20 years without getting hurt."

This is probably the poorest, but most commonly used, excuse for not developing standard work procedures. Just because you have an employee who has been lucky for many years doesn't mean they will continue to be lucky. And if you have "old dogs" working for you, you better start teaching them some new tricks.

It is not true that employees who have done the job a certain way for years can't be taught better and safer ways of doing it. It takes more patience and understanding to retrain long-time employees. But the success of your business could well depend on your doing so. Increasingly, those businesses which can best adapt to change are the ones which will survive.

4. "I developed a procedure, but none of the employees wanted to use it so I didn't insist."



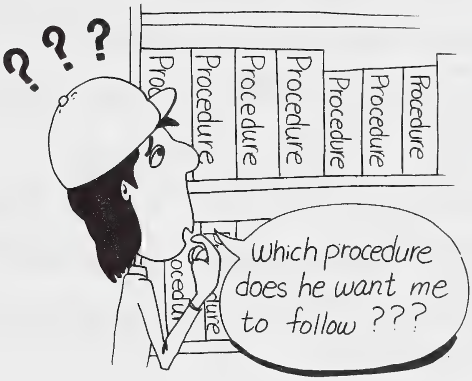
when developing procedures is a mistake often made by companies which have specialists to develop their procedures. Procedures "handed down from on high" rarely work as well as those developed cooperatively with the people who will be using them.

Employees will be hesitant to use a procedure which is obviously outdated. Don't make the mistake of treating your procedures as if they were "carved in stone." Review them every so often to see if they can, or should, be updated. Requiring your employees to follow obsolete procedures can discourage them from using any procedures.

5. "I have crews working all over the place. I don't have time to go around and watch how they're doing the work."

This is an excuse many owner-managers use when they have employees working for them in a variety of locations. Admittedly, it can be hard to visit all the job sites to see how the work is being done. As owner-manager, you have many demands on your time that keep you tied to your desk. But if you do have employees working in more than one location, you need to check on their work at each one on a regular basis. Unless you know what they're doing and how it's being done, you could easily lose out to your competition without being aware that you were. Worse, you won't even know why.

6. "I have procedures for every job, but most of them are ignored."



He told me to follow the procedure.

It has been said that the last act of a dying company is to develop a new policy and procedures manual. Watch out that this doesn't happen to your business! Too much reliance on written procedures can destroy the employee motivation needed to keep you competitive. Don't develop a procedure until you're sure it's really needed. In the next portion of this chapter, you'll find suggestions for deciding which jobs need procedures.

In the chapter on The Employee, the game of golf is used to show the importance of setting goals. It can also be used to show the effect on employee motivation when there are too many procedures to follow. Imagine how you would feel about playing golf if:

- you were allowed to use only two balls to play 18 holes,
- you were limited to the use of two clubs,
- you were required to use left-handed clubs, and
- you were limited to 72 strokes for the entire 18 holes.

If the game was regulated this closely, would you want to play? Probably not. In the same way, too many procedures can discourage your employees, and their work—and your business—will suffer.

B. Types of Jobs which Need Procedures

Some jobs need standard work procedures more than others. Examples of those jobs most likely to need standard procedures are:

1. Jobs in which errors often occur and where injury, damage, waste, or other possible losses may result.
2. Jobs in which errors could result in loss of profits or of customers.
3. Jobs the employees have not done before.
4. Jobs that have been changed; for example, by the addition of a new material or use of a new piece of equipment.
5. Jobs that aren't done often enough to be familiar to those doing them.
6. Jobs where the output quality, or service, is less than expected.

C. Developing the Procedure

Here are the steps to follow when developing a procedure:

First make up a chart with three columns. At the top of the first column write "Job Step", at the top of the second "Potential Problem", and at the top of the third "Solution" as shown in the example that follows.

Second, break the job into steps—actions which have a definite beginning and end. In the first column list each step in the order required to do the job for which you are developing the procedure.

Third, think of all the problems that might arise at each step. Get your employees to help you do this. Write these down in the second column beside the step to which they apply.

Fourth, think of as many ways as possible for preventing these problems, again with your employees' help. List these in the third column beside the problem to which they apply.

Fifth, using your chart, and with your employees' help, select those solutions best suited to your needs and resources. Cross out the other solutions. This chart can be used as a guide for writing the procedure to be followed by anyone doing this particular job.

An example will help you understand the process for developing a procedure. The owner of a small grocery store with 10 employees is concerned about losses he is having. His employees have had two accidents in the last month. Each occurred while a wholesaler was making a delivery. One employee slipped on some ice on the loading dock and sprained his wrist. The other pulled a back muscle trying to lift a carton of canned goods to the top of a pile of stacked cartons. Both employees had to take time off from work. And both incidents also resulted in work delays due to short staffing, an increase in Workers' Compensation assessments, and damage to some of the goods dropped when the employee slipped.

The owner-manager realized a written procedure could help prevent future accidents. So he made up a chart as shown in the following example.

In this example, the owner-manager listed each of the steps involved in making a delivery. Then—with the employees' help—he listed all the things that might create problems and possible solutions for these. Finally, he selected the solutions best suited to his needs and resources. Since he couldn't afford to buy and install a space heater, he and the employees agreed that supplying winter jackets would be a reasonable alternative. He also purchased a portable roller conveyor and a pallet jack. He found these did reduce the chances of employee back injury. But they also cut unloading and stocking times almost in half. Because of this, the equipment paid for itself in less than a year.

D. Putting the Procedures in Writing

A written procedure tells anyone reading it how to do the job. It identifies the material and equipment to be used and tells how to use them.

The chart used to develop a procedure can serve as the basis for putting it in writing. Describe each step to be followed in doing the job. List the material and equipment to be used in each step and tell how to use them. Identify possible hazards and what to do to avoid them. Use specific terms, not phrases like "be aware of" or "be careful not to". Explain how to be careful and state what to be aware of.

Reviewing the following checklist will help you make sure your written procedure does what you want it to do.

EXAMPLE OF A JOB PROCEDURE WORK SHEET

JOB STEP	POTENTIAL PROBLEM	SOLUTION
1. Preparing the area	- protruding nails in pallets	- check and repair pallets
	- slips of paper & cardboard left on the floor	- provide a suitable trash container and clean area
	- cuts from metal banding	- wear leather gloves
2. Parking & positioning the truck	- damage to loading area	- assign a receiver to guide the driver
	- health hazard from vehicle exhaust	- make sure driver shuts off engine
	- truck crushing an employee against dock	- receivers not allowed on dock until fully parked
3. Unloading the goods	- sickness when unloading in cold weather and higher heating bills	- purchase winter jackets - install gas-fired space heater - install plastic heat conservation partitions on door
	- strains from lifting	- purchase portable roller type conveyor to move goods
	- slips on icy or wet surfaces	- use sand and floor dry - use slip resistant footwear
	- foot injuries from dropped boxes as well as damaged goods	- wear proper protective footwear
	- damage and possible injury from moving unstable loads	- teach and use proper stacking techniques
	- time and manpower wasted with current method of unloading	- use portable conveyor and purchase pallet jack
4. Stacking the goods	- strain from lifting goods to higher levels	- use pallet jack, not hand cart
	- damage to goods and injuries due to haphazard stacking	- stock on shelves - heavier goods on lower levels - label shelves
5. Cleaning area after delivery	- same as #1	- same as #1

E. Work Procedures Checklist

1. Does your procedure specify how the work is to be done? Does it describe the steps to follow?
2. Does your procedure specify how the materials needed are to be used?
3. Does your procedure specify how the machinery, tools, or other equipment are to be used?
4. Does your procedure cover the possible health effects on the work environment of the products being used or produced? For example, a mechanic's performance would be affected if engine exhaust was not properly vented.
5. Does your procedure take into account other environmental factors? This would include such things as slippery floor surfaces, lighting and noise levels.
6. Does your procedure take into account the possible consequences of your work to other people or other facilities? For example, if the work requires the use of a ladder or scaffold, does your procedure include precautionary measures to protect anyone walking or working below?
7. Does your procedure clearly identify personal responsibilities? Does it state who is responsible for supplying safety equipment? Does it specify responsibility for equipment maintenance?
8. Are your employees capable of following the procedure? Are they physically and mentally capable? Do they have all the training needed to carry out each step of the procedure?
9. Are there obstacles that may prevent your employees from following the procedure? For example, if they are working to a very tight deadline, they may look to faster (not better) ways of doing the work. Or, if the procedure calls for use of a respirator and one is not readily available, the procedure may not be followed.
10. Are there incentives which encourage employees not to follow the procedure? If employees are given a bonus or extra time off for completing the job quickly even though the procedure wasn't followed, this defeats its purpose.
11. Have your employees helped develop the procedure? If not, they are not as likely to follow it.
12. Do your employees believe this procedure is necessary? Unless you have explained what you expect it to do and had them help you develop it, they may not think it is necessary.
13. Does using this procedure result in better quality productivity, and safety than doing the work without it?
14. Does the procedure identify the possible penalties for not using it? Did the employees help decide on the penalties?

Any load can be lifted if the whip is strong enough.

DISCIPLINE

To be effective, procedures must be followed. Enlisting employees' help in developing them helps make sure they will be followed. But when they aren't followed, some form of disciplinary action is needed.

Positive reinforcement (praise) for work done right encourages self-discipline. Some of the benefits from such reinforcement include:

1. Employees are encouraged to repeat the good performance or safe behaviour.
2. Employees will get more satisfaction from their work. And satisfied employees are more productive.
3. Better working relationships with employees. They will be more receptive to following orders.
4. Peer group pressure to do the work right is fostered.
5. Eliminates the need to take disciplinary action. Even in well-managed companies it is sometimes necessary to take disciplinary action. The best way to assure that such action is viewed positively is to use the approach described elsewhere in the Manual. The description can be found in the Employee Motivation portion of The Employee

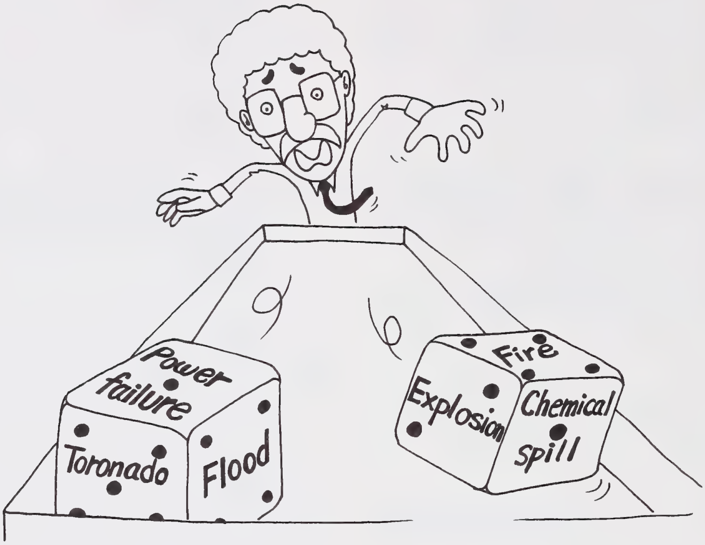
chapter and the portion on Ensuring Accountability in the Management Responsibilities chapter.

Disciplinary Action Checklist

The following checklist will help you be sure disciplinary action is needed and is properly applied. If you can answer "Yes" to all these questions, your discipline will be effective. But if you can't answer "Yes" to any, your approach to discipline needs to be improved.

1. Did you have a standard way (procedure) for doing the work?
2. Was the employee fully aware of the procedure and of the consequences for not following it?
3. Did the employee have the knowledge, skill, and ability to do the work properly?
4. Has the employee's performance ever been unsatisfactory in the past? If so, what was done about it then?
5. Did the employee receive positive reinforcement for doing the work properly in the past?
6. Was there anything beyond the employee's control which influenced the employee to do the work improperly?
7. Are you applying discipline consistently (that is, not singling out one individual and overlooking other offenders)?
8. Does the employee believe the severity of the discipline is justified?
9. Did the employee know what the discipline would be and under what circumstances it would be applied?
10. Did you discuss the situation with the employee in private prior to imposing the discipline?
11. Did you and the employee learn from the experience? Will the knowledge gained help prevent a recurrence?

Emergency Planning



Even though the odds are against it happening, you can always be faced with an emergency.

If you are smart, you will have insured your business against risks such as fire, theft, and employee accidents. You know that even though the insurance adds to your costs, without it you risk a loss that could bankrupt you.

INTRODUCTION

But what you may overlook is that the losses you insure against represent only a small portion of the losses you could face. (Additional losses you could face are discussed in the chapter "Controlling Costs By Preventing Losses".) And such additional losses are rarely covered by insurance. An example of this kind of loss would be the costs of the business you can't do while waiting for your plant to be rebuilt after a major fire.

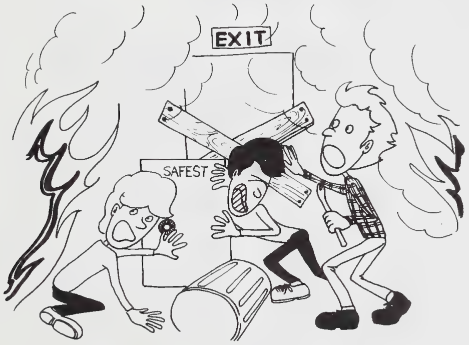
Accident statistics and health and safety-related surveys show that most small businesses are not well prepared for emergencies. One recent survey of autobody paint shops found that:

- 94% did not have a sprinkler system,
- 78% either did not have the required explosion-proof lighting, or had it but it was in disrepair,
- 57% had flammable liquids stored improperly, and

- 25% had fire extinguishers that had been emptied and not refilled or recharged.

You can reduce the risk of loss when an emergency arises or a catastrophe strikes if you plan in advance how to deal with it. Your planning needn't require expensive emergency controls or the use of high-priced specialists. It can be as simple as installing an exhaust fan or a smoke detector, or providing fire extinguishers and making sure your employees know how to use them. But whatever form it takes, it will involve some cost.

You may think you have better ways to spend money than investing in emergency planning. If so, you should think again. While it won't provide an immediate pay-off, this investment could be the one that saves the business you've worked so hard to build. So, it will pay you to plan how to protect your business from the potential effects of serious accidents, fire, chemical spills, natural disasters, and other emergencies. Of equal importance, emergency planning can also prevent injuries and even death.



Are you prepared for an emergency?

EMERGENCY PROCEDURES

You need to realize that sooner or later your business will be faced with an emergency. Even if you have control measures such as a ventilation system to remove explosive vapours or personal protective equipment to protect your employees from harmful substances, an emergency can arise. Protective control measures can fail, or they may simply be inadequate to do the job. Whatever the reason, the fact that such things can happen shows why you should develop back-up systems or alternative plans of action.

What you or your employees do in the first few minutes after an emergency arises is critical. The speed with which you (or they) react, and the actions taken, can mean the difference between no loss, very little loss, or a total loss. For example, it can mean the difference between putting out a small fire in a wastebasket and trying to put out a fire that is burning down your whole building. Or it can literally mean the difference between life and death. When an emergency arises, you need to know what to do and do it quickly. You won't have time to look for emergency response equipment located where it's hard to find, to read the directions for using the equipment, or to fight your way out of a blocked exit.

An effective emergency plan needs the same kind of knowledge and organization as any other kind of business planning. Because a poor plan is not much better than no plan, you should get help if you don't know how to set up an emergency plan. There are professional consultants available who do this. But if you can't afford their services, there are other sources of help available at little or no cost. Some of these sources are listed in Part One of the Manual.

Emergency Procedures Checklist

The questions on this checklist will show how well prepared you are to deal with an emergency. You should be able to answer "yes" to all of them. If you can't, your emergency planning needs to be improved.

1. Have you identified the kinds of emergencies your business might face?
2. Have you assessed the potential harm to people, equipment, property, and the environment?
3. Have you developed procedures for dealing with these emergencies?
4. Have your employees helped you develop the procedures?
5. Have your procedures been reviewed by specialists such as the fire department, your safety equipment supplier, or an insurance inspector?
6. Does everyone understand the procedures (this is particularly important with newly-hired employees)?
7. Have you put your emergency plan in writing?
8. Does your plan include a readily available list of sources of help such as doctors, police, fire

department, ambulance, poison centre, public utilities (gas and electric), and their telephone numbers?

9. Have you looked into the availability of these sources in terms of the time it may take to respond to your call for help or the distance to the nearest hospital?
10. Does your plan include a method of evacuating employees and customers?
11. Have you established safety zones or areas where people will assemble before evacuating?
12. Have you installed warning systems such as fire alarms and smoke detectors?
13. Have you provided the equipment needed to respond to the emergency, such as first aid kits, fire alarms, extinguishers and hoses, respirators, emergency showers, and emergency lighting?
14. Have you and your employees been trained in the use of the emergency equipment?
15. Have specific emergency duties been assigned and is everyone aware of them? For example, who will sound the alarm, who is to use the fire extinguisher or fire hose, and who coordinates the evacuation if one is required?
16. Have your procedures been reviewed with and practiced by all your employees?
17. Does your plan include an inspection schedule for checking emergency equipment and escape routes?
18. Do you hold emergency drills from time to time?

Are you prepared to provide first aid?

AIDING THE VICTIM

You or one of your employees could have a heart attack, receive an electrical shock, be exposed to a toxic substance, break a leg, or get cut or burned. When this happens, medical help may be needed. But even where such help is quickly or readily available (which it isn't in most small businesses), first aid measures can reduce the severity of an injury. In fact, first aid can help save a life. Injured people can have severe bleeding stopped, their heart started beating, or their lungs or stomach emptied by the proper use of first aid techniques.

First aid training does much more than teach how to apply bandages and splints. It explains how accidents happen, how they can be prevented, and what specific things to do when someone is hurt (or what not to do, in the case of some neck or back injuries). It also provides training in such techniques as cardiopulmonary resuscitation (CPR) and the Heimlich maneuver (which is used to dislodge food stuck in the windpipe when someone is choking).

Because of its importance, it will pay you to have at least one person in your business trained in first aid. As an example of just how valuable it is, one Canadian study showed that comprehensive first aid training can help reduce a company's accident rate by as much as 30%.

In addition to its being valuable, there are legal requirements covering the provision of first aid. The First Aid Regulation of the Occupational Health and Safety legislation requires an employer to provide and maintain first aid equipment and services suitable to:

- the dangers of the job,
- its remoteness from medical services, and
- the number of people employed.

For more specific information on your legal requirements, you can refer to the First Aid Regulation. The address where you can obtain a copy is shown in Part One of the Manual.

Medical Aid

When someone is hurt, the person giving first aid should not also have to make calls for assistance. Someone else should do this, and all employees should know how to call for help. A list of the sources and their telephone numbers should be made up and kept where it is easy to find.

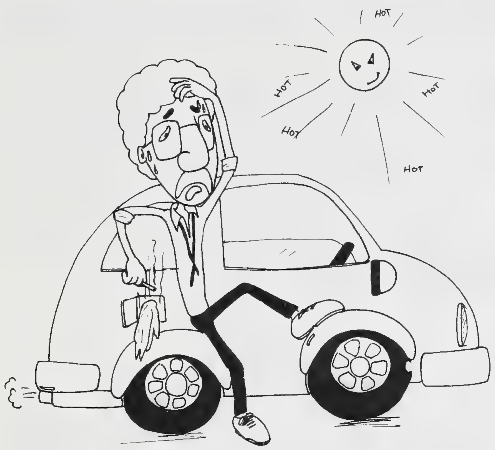
At most work sites, where there is more than one worker, persons qualified as first aiders must be present at all times to administer first aid. You must also keep accurate records of all trained first aid personnel at the work site and of every injury which occurs. If a municipal or commercial ambulance is not readily available, an alternative means of emergency transporation should be available.

EMERGENCY EQUIPMENT

It is important that you have the proper emergency and first aid equipment. Even if there is only one employee on a site, a kit containing essentials such as bandages, gauze, and scissors must be available. As the number of employees increases, more elaborate first aid equipment and trained first aid personnel are required. The First Aid Regulation gives details on the supplies and personnel required. All equipment must be in good working order and within easy reach. The example of an eyewash station or an emergency shower will show what is involved. Where needed, each of these should be:

- ready for use at all times,
- located as close to the hazard as possible (victims should not have to go up or down stairs or dodge around obstacles to reach them),
- easily recognizable (identified by well-marked and easily understood signs or against a brightly-painted section of wall), and
- checked regularly to be sure they are working. You should have enough of the right kind of equipment to protect against the worst possible emergency. Fire extinguishers, for example, should be rated for the type of fire they may have to extinguish (paper and wood, oil and gas, or electrical) and be big enough to do the job. If your business has two or more floors, every stairway should have exit signs and emergency lighting.

Finally, you and all your employees need to know how to use the emergency equipment you provide. Time spent explaining and ensuring its use is understood will be time well spent.



FIRE PREVENTION AND PROTECTION

Fires are the cause of most small business emergencies. Therefore fire prevention and protection must be given special attention in an emergency planning program.

You don't have to be an expert to control fires. All you need to do is take the time to look for possible fire hazards, and then either eliminate them or make sure a fire can be put out quickly if one does start. Remember, small fires can get out of control very quickly. The way to prevent them from getting out of control is to:

- take common sense precautions,
- have proper fire protection equipment available,
- develop an emergency plan, and
- have people trained to take prompt action if a fire does start.

If you feel you don't know enough to develop your own fire prevention and protection program, you can get help. Your local fire department and your insurance company are good sources of free advice.

Fire Prevention and Protection Checklist

The following checklist identifies a number of the things you should consider in developing your fire prevention and protection program:

1. Do not allow flammable materials such as rags, paper, empty boxes, or wood scraps to collect. These can catch fire or add fuel to a fire.
2. Do not store combustible materials near operations which produce sparks or flames, such as grinding, welding, or gas cutting.
3. Store flammable products in well-marked containers specifically designed for this purpose.
4. Prohibit smoking in areas where materials that will burn are stored or used.
5. Check the fire exits regularly. Be sure they are well-marked and not blocked or locked.
6. Mount the proper type and size of fire extinguishers in easy-to-get-at locations. Check their condition at least once a month.
7. Train your employees in the proper use of the fire extinguishers.
8. Install smoke detectors or fire alarms. At regular intervals, check to be sure they are working.
9. If you have an automatic sprinkler system, check from time to time to be sure it is working and that the sprinkler heads aren't blocked.
10. Make sure all your employees (particularly new ones) know the fire emergency procedures. They must know such things as how to evacuate the building, where to assemble afterwards, and how to check to be sure everyone is out.
11. Develop a plan of action for assisting any employees who are handicapped to evacuate the building.
12. Check areas such as washrooms, where people may have trouble getting out.
13. Appoint and train an alternate fire warden to direct the evacuation in your absence.
14. Instruct trained staff to attempt to fight only small fires and to never allow the fire to come between them and the exit.
15. Hold periodic fire drills.
16. Have a representative from the nearest fire station inspect your premises and review your fire prevention and protection procedures.

SUMMARY

Whenever employees may have to perform specialized activities such as first aid or fire fighting, they need to be properly trained. Practice sessions must be held so all employees are fully aware of what they must do in an emergency and can do it promptly. Lack of preparation leads to confusion or panic.

After you have done your emergency planning, written down the procedures, and obtained the necessary equipment and trained your employees in its use, put your plan to the test: have a test drill. If it goes well, fine. If it doesn't go well, make whatever changes the test shows are needed. Do this, and you will know you are prepared to deal with an emergency if one does arise.

Accident Investigation and Reporting

Don't count on an accident not happening to you.

INTRODUCTION

This chapter:

- explains why you should investigate an accident,
- shows why a thorough investigation is essential,
- identifies some of the mistakes made in looking for an accident's cause,
- identifies some of the real causes of accidents, and
- gives a procedure to use in investigating an accident. (Although designed for use in accident investigation, this procedure can also be used to investigate other kinds of loss-producing situations).

PURPOSE OF ACCIDENT INVESTIGATIONS

There are two basic reasons why you should investigate an accident:

1. The first reason to investigate an accident is to fulfill your legislated health and safety responsibilities.
2. The second, and most important, reason for investigating an accident is to identify the causes so steps can be taken to prevent it happening again.

There are two important legislated responsibilities for reporting accidents you need to be aware of. One of these is described in this edited excerpt from section 13 of the Occupational Health and Safety Act:

If a serious injury or an accident that has the potential of causing serious injury to a person occurs at a work site, the employer for that work site shall:

(a) immediately notify a Director of Inspection (see addresses shown at the back of this booklet) as to the time, place and nature of the injury or accident;
(b) carry out an investigation into the circumstances surrounding it;
(c) prepare a report in accordance with the regulations, outlining the circumstances of the injury or accident and the corrective action, if any, undertaken to prevent a recurrence; and
(d) ensure that a copy of the report is readily available for inspection by an Occupational Health and Safety officer.

NOTE: For a definition of "serious injury" refer to the Occupational Health and Safety Act "Designation of Serious Injury and Accident Regulation".

This excerpt from the First Aid Regulation identifies the other legislated responsibility you have with respect to accidents:

An injury must be recorded in a record book provided for that purpose and the record shall include:

(a) date and time of injury;
(b) date and time injury reported;
(c) injured worker's full name;
(d) date of birth of injured worker;
(e) sex of injured worker;
(f) location and description of the cause of the injury;
(g) description of injury;
(h) first aid treatment rendered;
(i) name of first aid person.

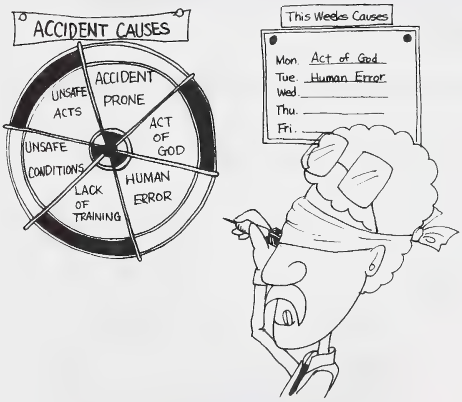
The Regulation also stipulates that the record book shall be kept for at least three years from the date of its last entry.

After an accident has occurred, the best way to prevent it happening again is to investigate and find out why it happened. The companies that do this—mostly big businesses—find that a proper investigation pays for itself in terms of preventing future accidents and the losses they cause.

Accident investigations have also been useful in improving product quality. The aerospace industry, for example, is one where major technical improvements have resulted from what has been learned from investigating accidents.

THE NEED FOR THOROUGH INVESTIGATION

To prevent accidents, you need to know what causes them; and to discover their cause, you need to investigate them thoroughly enough to correctly identify the real causes. If you don't do this, your investigation will be a waste of time and money.



Don't speculate: investigate!

WHY MANY INVESTIGATIONS FAIL

There are many reasons why an investigation can fail to identify the real cause(s) of an accident. Some of the more common ones are:

Investigating Only Injury-Producing Accidents

Many owner-managers have a tendency to investigate an accident only if an injury results or there is much bleeding. Potential injury-causing incidents are often ignored. Don't make this mistake! Instead, consider every incident a warning signal; and heed the signal. For example, if there is an accident and no damage is done, don't ignore the incident. Investigate the accident to find out why it happened. Did the throttle stick, or the brakes fail? Was the operator properly trained? No matter how minor the incident may appear, investigate it thoroughly; and then take whatever action is needed to prevent it from happening again.

Drive Fork lifts with extreme Care!!

"Phew! I thought for sure I was a goner."

Failing to Look Beyond Symptoms to the Cause

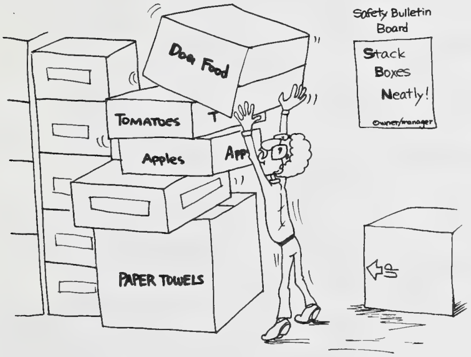
In investigating accidents, many owner-managers look only for unsafe acts or conditions, but fail to look for their cause. For example, an employee trips on a piece of scrap on the shop floor and sprains an ankle. The unsafe act was carelessness about where the feet were being placed. The unsafe condition was the poor housekeeping which resulted in the scrap being on the floor instead of in a scrap bin. But neither the act nor the condition are the true cause of the accident. To prevent a similar accident, you need to find out who left the scrap on the floor and why it was left there; and then take steps to assure that in the future all scrap is put in a scrap bin.

Safety Comes First!
Ooops!
Safety Comes First
ASPIRIN

Treating the symptom doesn't remove the cause.

Owner-Manager Bias

When investigating an accident, many owner-managers don't realize that they could have caused it. They look at the conditions of the work site and the employees' actions. But they forget that they are responsible for establishing and maintaining the conditions under which the employees work. If these conditions are found to be the cause of an accident to one of your employees, remember it is your responsibility to change them.



Blaming Acts of God

Accidents due to circumstances beyond human control are said to be caused by an "Act of God". When someone is injured by a tornado or an earthquake, the accident can rightly be attributed to God. But He doesn't hover over the work site looking for a way to unleash his wrath on employees. When someone is injured in an industrial accident, there are specific, identifiable reasons for this happening. Taking a fatalistic attitude and saying the accident was destined to happen does nothing to prevent recurrences.

Labelling Employees Accident-Prone

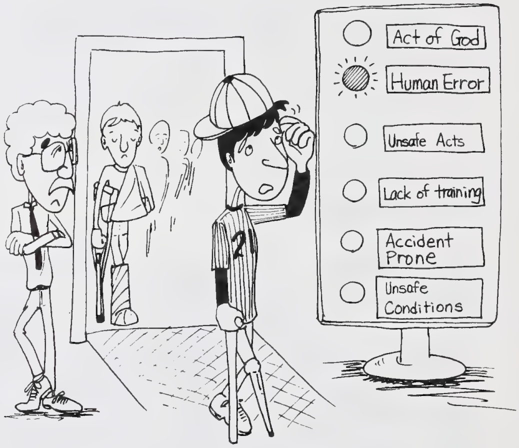
Some owner-managers blame accidents on accident-prone employees. Such employees are thought to have personality traits which cause them to have more accidents than the average person. However, detailed

Don't blame God for circumstances under your control.

accident investigations have shown that factors other than personality are usually to blame for their high number of accidents. These factors range from poor eyesight or poor lighting to a lack of proper tools, all of which can be corrected if properly identified and dealt with. If one of your employees is involved in a number of accidents, be sure your investigation uncovers the real cause.

Blaming Human Error

While it is true that human action or lack of action causes most accidents, an investigation which lists the cause as human error is incomplete. For, not only does this allow the real cause to be ignored but it leads to a mistaken belief that nothing can be done to prevent the accident from happening again. If preventative measures are to be taken, you need to try to find out why your employees acted in such a way that there was an accident. And listing the cause as carelessness, forgetfulness, poor judgement, or bad timing does not go far enough. You need to look deeper.



THE REAL CAUSES OF ACCIDENTS

If an accident investigation is conducted properly, a number of causes will usually be revealed. These can include such things as:

1. No procedures for doing the work, or poor procedures.
2. Employee did not know procedure existed.
3. Employee lacked the skill or knowledge to follow the procedure.
4. The procedures either have never been enforced, or the enforcement has not been consistent.
5. The equipment or materials needed to follow the procedure were not available.
6. Tools and equipment not inspected regularly or not properly maintained.
7. Obstacles which hindered the employee from following the procedure.
8. Incentives which encourage the employee to take potentially dangerous shortcuts.
9. Employee dislike of job.
10. Poor job design.
11. Products made or materials used which are potentially harmful.
12. Hazardous workplace conditions, such as poor lighting or slippery floor.
13. Others at the work site caused a distraction.
14. Inattention or error due to preoccupation with a personal or health problem (possibly drug or alcohol induced).

By using the Accident and Loss Prevention Flow Charts which follow, you should be able to identify the real causes of an accident.

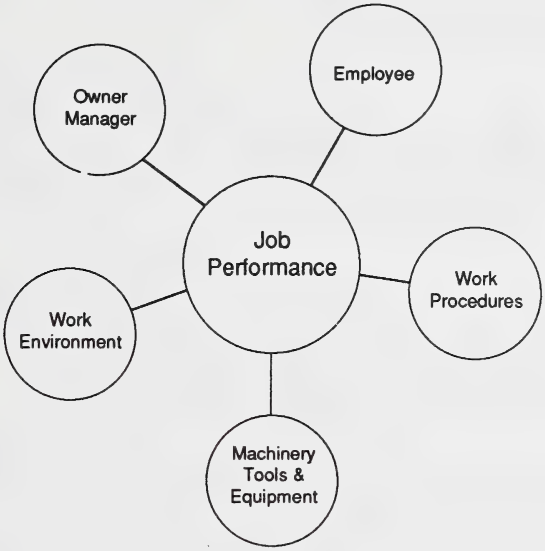
Once identified, each cause can be dealt with. For example, mentally or physically exhausting work can be scheduled for the beginning of the shift; good communication with employees can help you identify those with personal problems and take whatever action is necessary and possible to compensate for the problem; and job rotation can minimize job monotony.

ACCIDENT INVESTIGATION AND REPORTING

The primary purpose in investigating accidents is to determine their cause so you can take the necessary steps to prevent them happening again. Use of an accident report form can serve both as a guide for conducting your investigation and as a permanent record of the incident. As mentioned several times, the usefulness of any accident investigation depends on its quality and thoroughness. And this is where a good report form can be a big help.

During the course of your investigation, you should discuss your findings with your employees. You will find their input helpful in identifying the accident's real cause(s) as well as in suggesting preventative measures.

Accident and Loss Prevention Flow Charts



Factors which affect job performance.

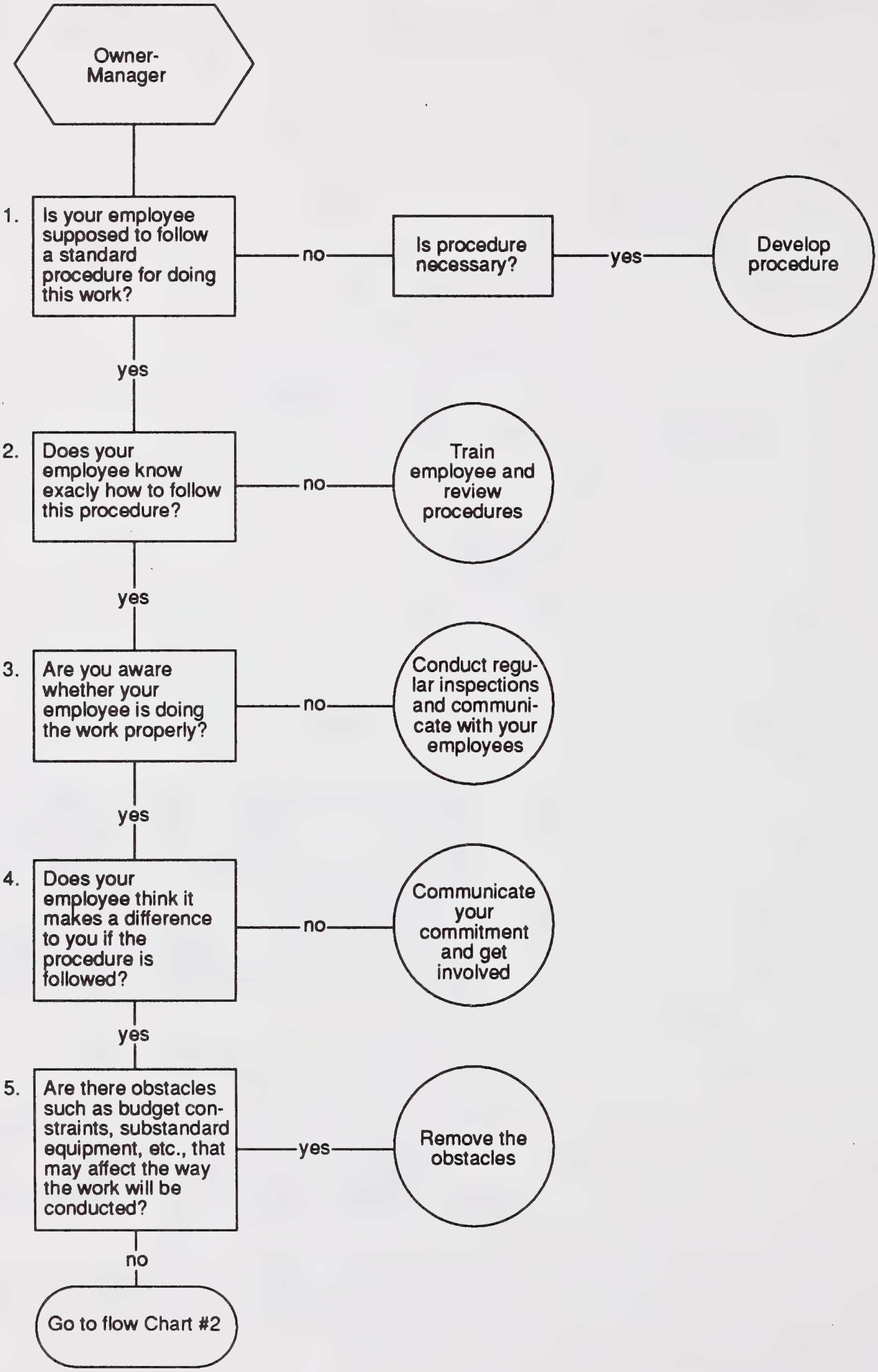
To prevent accidents or losses, you need to know what causes them. This chapter provides information showing how to conduct an orderly investigation to identify situations which could cause an accident or loss and how to correct these.

There are five factors which affect the way a job is done, and accidents can be caused by a problem with any of the five. As shown in the figure, these factors are:

1. Owner-manager (how you manage).
2. Employees (how they do the work).
3. Work Procedures (how the work is done).
4. Machinery, Tools and Equipment (what your employees use to get the work done).
5. Work Environment (the place or conditions under which the work is done).

To identify situations which could cause accidents or losses, each factor needs to be systematically examined.

FLOW CHART 1
INVESTIGATING OWNER-MANAGER PERFORMANCE


Owner-Manager
1. Is your employee supposed to follow a standard procedure for doing this work?
no
Is procedure necessary?
yes
Develop procedure
yes
2. Does your employee know exacly how to follow this procedure?
no
Train employee and review procedures
yes
3. Are you aware whether your employee is doing the work properly?
no
Conduct regular inspections and communicate with your employees
yes
4. Does your employee think it makes a difference to you if the procedure is followed?
no
Communicate your commitment and get involved
yes
5. Are there obstacles such as budget constraints, substandard equipment, etc., that may affect the way the work will be conducted?
yes
Remove the obstacles
no
Go to flow Chart #2

The flow charts in this chapter provide a step-by-step approach for doing this. Using them, you can see if the work is being done the way it should be to prevent accidents or preventable losses. If it isn't being done right, the charts show the steps you need to take to correct matters.

In using the charts, here are some of the things you should consider:

A. Remember, the charts are only guides. They do not include all the possible circumstances you may find. More than likely, they will raise more questions than they answer. If so, great. Their purpose is to help steer you in the right direction. It's also to keep you from making the kinds of mistakes many of your competitors make.

B. If, by following one of the charts, you are helped to find and correct a potential accident-causing situation, don't stop. Go through the procedure for the other four. Most accidents can be prevented only by taking action in a number of different areas at the same time. Following the procedures in each chart may uncover something that can contribute to your solution.

C. Be honest with yourself when using the charts. If the question is, "Are there obstacles you may have placed in your employees' way?", your initial reaction may be to say "No". But stop and think if this is correct. Have you done so without realizing it? Have you set an unreasonable deadline? Have you provided improper tools? If you've done any of these things your answer to the original question should have been "Yes". By answering "No", you will have missed out on a very important part of the solution to your problem. You'll be like the chap who sucks in his gut while getting fitted for a pair of pants. Total honesty is essential if you want a good fit (a good accident and loss prevention program).

FLOW CHART 1: INVESTIGATING OWNER-MANAGER PERFORMANCE

BOX 1

- If it is important that the work gets done in a certain way, there should be a standard procedure for doing it. This procedure should be discussed and developed by you and your employees.

BOX 2

- Procedures should usually be put down in writing. This way they can be referred to and reviewed. Procedures are easily forgotten, and therefore must be reviewed periodically.

BOX 3

- If you do not know what your employees are doing or how they are doing it, you will have accidents, substandard work, and waste. Inspect the work and work site on a regular basis.

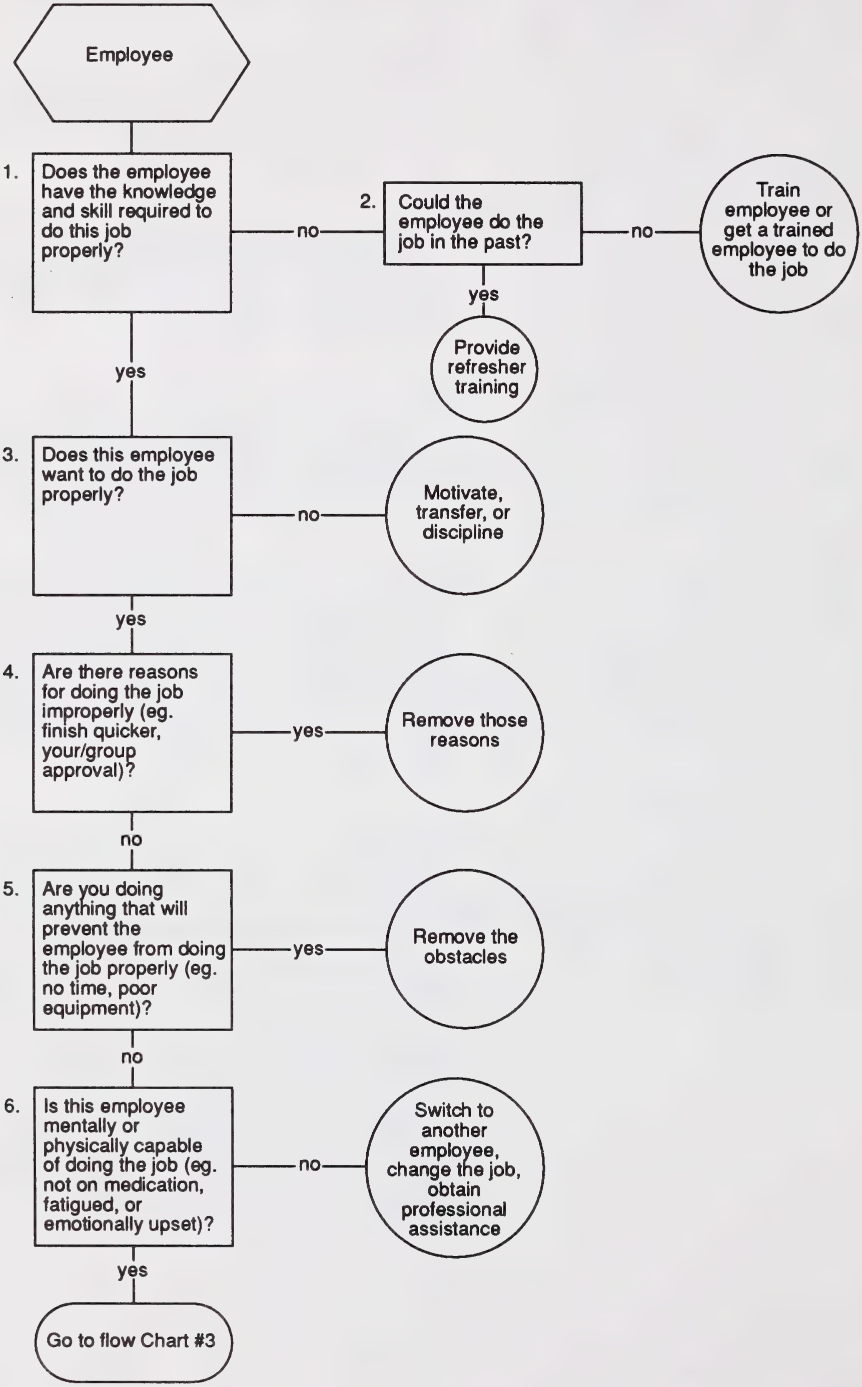
BOX 4

- If you don't inspect the work and let your employees know how you want it done, it will not necessarily get done the way you want it done. This could result in accidents and losses. If your employees are doing the job right, let them know you approve. If they are not doing it right, discuss your concerns with them.

BOX 5

- Sometimes employees are prevented from doing the work properly by things that are totally out of their control. For example, if you told your employee that the work had to be done in 30 minutes and also emphasized that it must be done safely, the employee could be faced with two conflicting goals. If it is not possible to do the work safely in 30 minutes, the employee may choose to take unsafe shortcuts in order to meet the deadline. Typically employees are charged with not following the standard procedures in these cases. The fact is, they may have had little choice. By not giving your employees sufficient time or the proper equipment needed, you place obstacles in their path.

FLOW CHART 2
INVESTIGATING EMPLOYEE PERFORMANCE


Employee
1. Does the employee have the knowledge and skill required to do this job properly?
no
2. Could the employee do the job in the past?
no
Train employee or get a trained employee to do the job
yes
Provide refresher training
yes
3. Does this employee want to do the job properly?
no
Motivate, transfer, or discipline
yes
4. Are there reasons for doing the job improperly (eg. finish quicker, your/group approval)?
yes
Remove those reasons
no
5. Are you doing anything that will prevent the employee from doing the job properly (eg. no time, poor equipment)?
yes
Remove the obstacles
no
6. Is this employee mentally or physically capable of doing the job (eg. not on medication, fatigued, or emotionally upset)?
no
Switch to another employee, change the job, obtain professional assistance
yes
Go to flow Chart #3

FLOW CHART 2: INVESTIGATING EMPLOYEE PERFORMANCE

BOX 1

- The next two questions deal with making sure your employee knows how, or is competent, to do the work. Does the employee have the knowledge and skill required to do the work properly? If not, you can either train the employee to the level needed, or you may decide it is more cost-effective to get another trained employee to do that particular job. This alternative is one you may decide upon if the job requires a high level of skill or knowledge to do properly and the present employee is not highly skilled or knowledgeable in that area.

BOX 2

- Your employee may have been capable of doing the work properly in the past but requires some refresher training. If it has been a long time since the employee used the equipment they may have forgotten how to use it properly. In this case, refresher training may be all that is required to prevent a loss.

BOX 3

- If you have an employee who simply does not want to do the job, let alone do it properly, you may have someone who is "an accident looking for a place to happen". The employee may not like the work, may feel that it is beneath them to do it, or may believe the work should be done another way. Whatever the reason, this is a problem which you will have to deal with before the employee starts to do the work. Ways to correct this problem include: motivate the employee, transfer to another job; or in extreme cases, use discipline.

BOX 4

- Sometimes a job is not done properly because the employee has an incentive or is rewarded for doing it improperly. If you pat an employee on the back for finishing the work quickly (in spite of the face that shortcuts were used), you are rewarding that employee for not following the standard procedure. Sometimes approval from fellow workers will also encourage this kind of behaviour. If the employee is rewarded with extra time off for coffee or a bigger paycheque for finishing quickly, these can also be incentives to not follow the standards. These negative incentives are often very difficult to spot, but you must find and remove them.

BOX 5

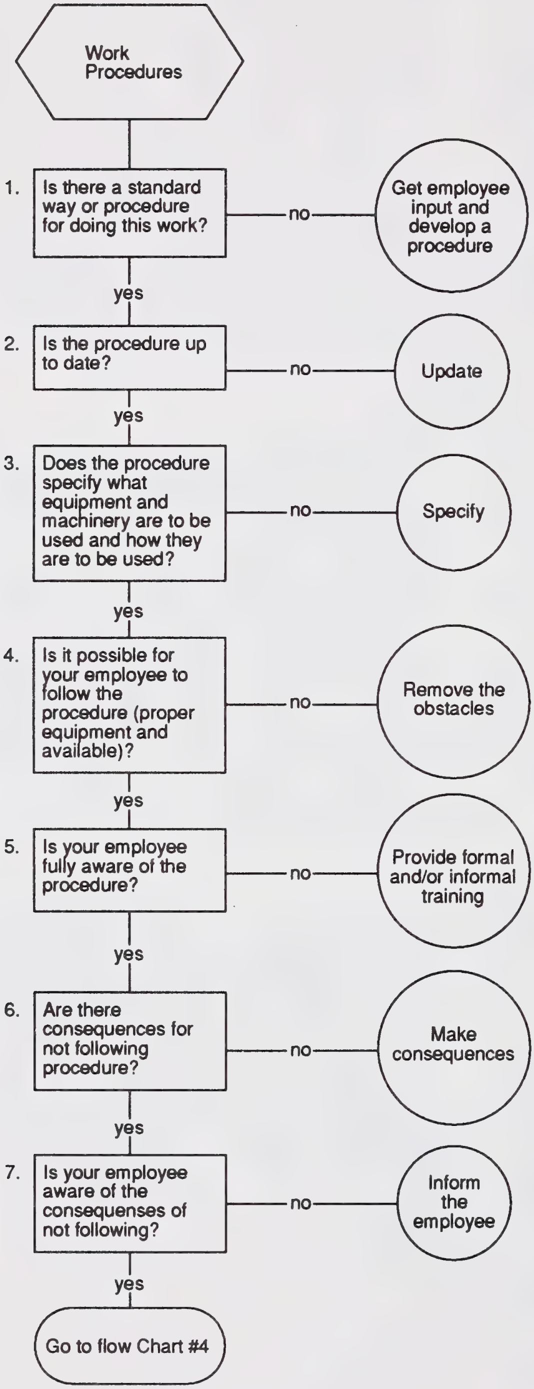
- You may unintentionally be doing something that will hinder the performance of your employee. Perhaps you have not allowed enough time to do the job the way you want it done. This will encourage the use of shortcuts. The type and condition of the equipment used to do the job will also affect performance. If the right equipment is not available, the employee will likely improvise or make do with whatever is readily available. Maybe the equipment you have provided is not suitable for this particular employee. Personal protective equipment is a good example of this. If it fits and is well designed for one employee, it does not necessarily mean it is good for all employees. Like the negative incentives above, these obstacles are often hard to spot but you must find and remove them.

BOX 6

- If your employee is not mentally or physically able to do the job properly, losses will result. Perhaps the employee does not have the educational background or experience to fully understand what is required, or is not physically able or fit enough to do certain kinds of work. There could be a number of factors you may or may not be aware of that affect the performance of your employee. These might include: being on medication, a drug or alcohol related problem, fatigued from lack of sleep, emotionally upset from an argument. The list can be a long one. No employer can be aware of all these things; but, if you have a good personal relationship with your employees, you will be aware of many of them.

In the above cases there are many options. In the case of the employee who simply is not mentally or physically capable of doing the work, you might consider changing the job so that the employee can do it. Of course, you can shift the employee to another job. These options are open to you in instances where your employee is temporarily impaired. If the problem is more serious, such as alcohol or drug abuse, professional assistance or guidance may be best.

FLOW CHART 3
INVESTIGATING WORK PROCEDURES


Work Procedures
1. Is there a standard way or procedure for doing this work?
no
Get employee input and develop a procedure
yes
2. Is the procedure up to date?
no
Update
yes
3. Does the procedure specify what equipment and machinery are to be used and how they are to be used?
no
Specify
yes
4. Is it possible for your employee to follow the procedure (proper equipment and available)?
no
Remove the obstacles
yes
5. Is your employee fully aware of the procedure?
no
Provide formal and/or informal training
yes
6. Are there consequences for not following procedure?
no
Make consequences
yes
7. Is your employee aware of the consequenses of not following?
no
Inform the employee
yes
Go to flow Chart #4

FLOW CHART 3: INVESTIGATING WORK PROCEDURES

BOX 1

- For many jobs there is a standard way of doing the work which is recognized and accepted in the industry. A carpenter for example, is taught not only how to use the tools of the trade effectively, but also how to use them safely. For those jobs where standards are needed and have not been developed, you should get together with your employees to develop one. This will ensure that the work is done the way you want it done—properly and without losses.

BOX 2

- All procedures should be reviewed periodically. They can become outdated very quickly. You should constantly be looking for new, better, and safer ways of doing the work.

BOX 3

- Many procedures fail to offer the guidance needed to get the job done properly. If your procedures offer too many options, your employees will make decisions which may or may not be correct. For example, if you do not specify that a respirator is to be worn while spray painting, one may not be worn.

BOX 4

- You must make sure it is possible (or not difficult) to follow the procedure. If you require a respirator to be worn, then make sure it is readily available. Make sure it is the right kind of respirator, has clean filters, that it fits the employee properly, and that they know how to use it.

BOX 5

- Procedures are easily forgotten. If the procedure was developed some time ago and has not been used since, a review may be necessary. If you have an employee who is fairly new, they may not be aware that a procedure exists. This employee must be informed that one does exist and be trained in its use.

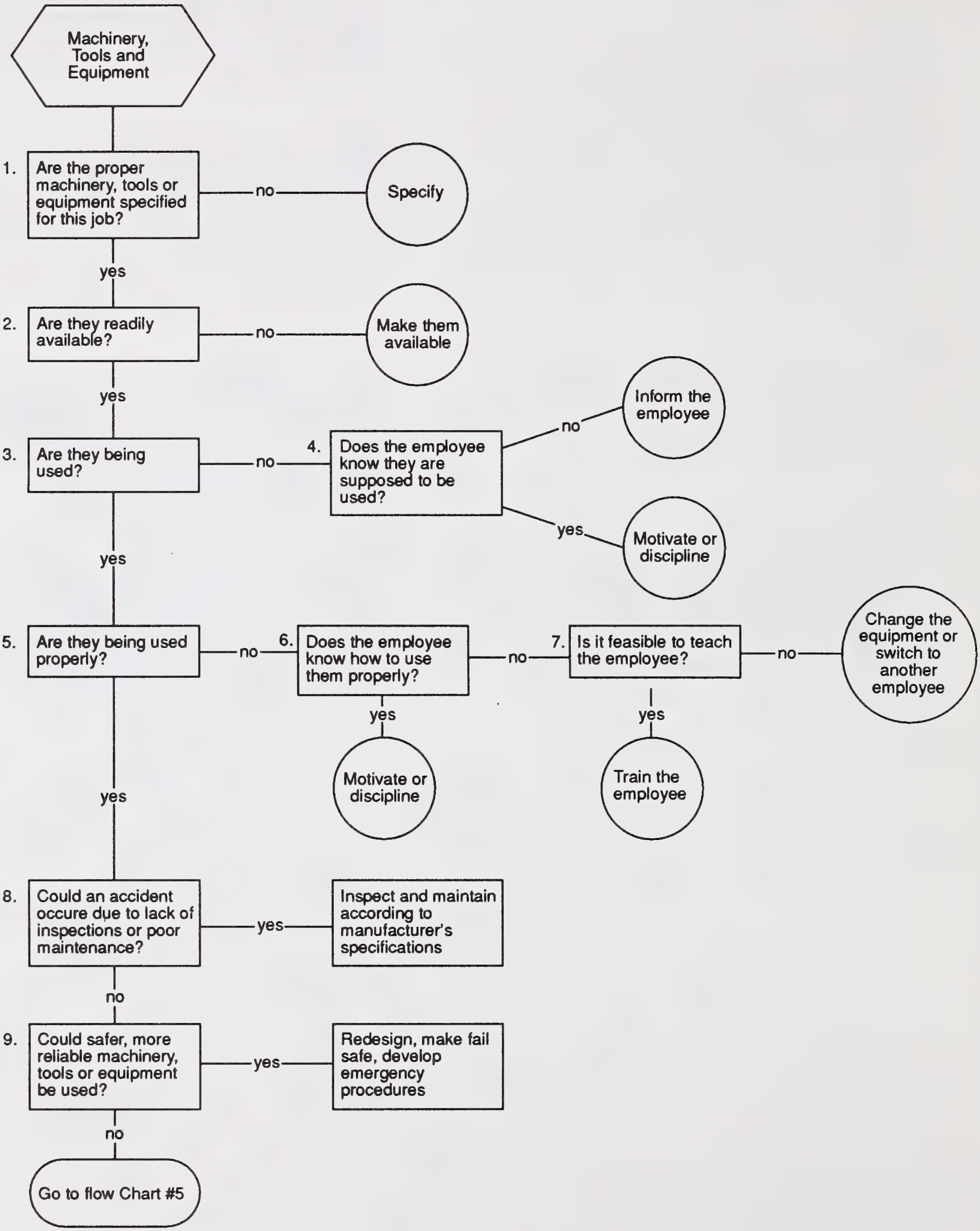
BOX 6

- When developing the procedure, have your employees suggest—and agree to—the disciplinary measures which will be taken if it isn't followed. This will make it easier to discipline them if they don't follow the procedure.

BOX 7

- If you must discipline an employee for not following the procedure, first make certain the employee was aware of the possible consequences. If the employee was not aware that disciplinary action would be taken, your punishment will be considered unfair and treated with resentment.

FLOW CHART 4
INVESTIGATING MACHINERY, TOOLS AND EQUIPMENT


Machinery, Tools and Equipment
1. Are the proper machinery, tools or equipment specified for this job?
no
Specify
yes
2. Are they readily available?
no
Make them available
yes
3. Are they being used?
no
4. Does the employee know they are supposed to be used?
no
Inform the employee
yes
Motivate or discipline
yes
5. Are they being used properly?
no
6. Does the employee know how to use them properly?
no
7. Is it feasible to teach the employee?
no
Change the equipment or switch to another employee
yes
Motivate or discipline
yes
Train the employee
yes
8. Could an accident occure due to lack of inspections or poor maintenance?
yes
Inspect and maintain according to manufacturer's specifications
no
9. Could safer, more reliable machinery, tools or equipment be used?
yes
Redesign, make fail safe, develop emergency procedures
no
Go to flow Chart #5

FLOW CHART 4: INVESTIGATING MACHINERY, TOOLS AND EQUIPMENT

BOX 1

- You should specify what machinery, tools and equipment are to be used for the job. If you do not, your employees may choose to use substitutes. This could result in an accident, substandard work, or waste.

BOX 2

- If it is inconvenient, or not possible to obtain the specified machinery, tools or equipment, your employees may decide to substitute something else. If, for example, you ask your employee to use a 3.6m ladder for a job because a step ladder is unsafe, the employee may choose to use the step ladder anyway, if the 3.6m ladder is not available or if it will take extra time and effort to get it.

BOX 3 & 4

- You will not be able to answer these questions if you do not take the time to get out to inspect the work site. If the specified equipment is not being used, ask why it isn't. If it is because the employees didn't know, inform them. If for another reason, reinforce your standards and encourage the employees to follow them. As a last resort, you may have to use discipline.

BOX 5, 6 & 7

- Again, if you do not get out to, and inspect, your work site you will not be able to answer these questions. It is not enough to know that the machinery, tools and equipment are being used. They must also be used properly. If you instruct an employee to cut some wood on a table saw, it is important that the employee not only cut the wood as asked, but use the saw in a safe manner. If that employee does not know how to use the saw safely, you must decide if it is feasible to take the time to teach them how to do so. You may discover that it is better to substitute another piece of equipment such as a hand saw, or get another fully trained employee to operate the table saw.

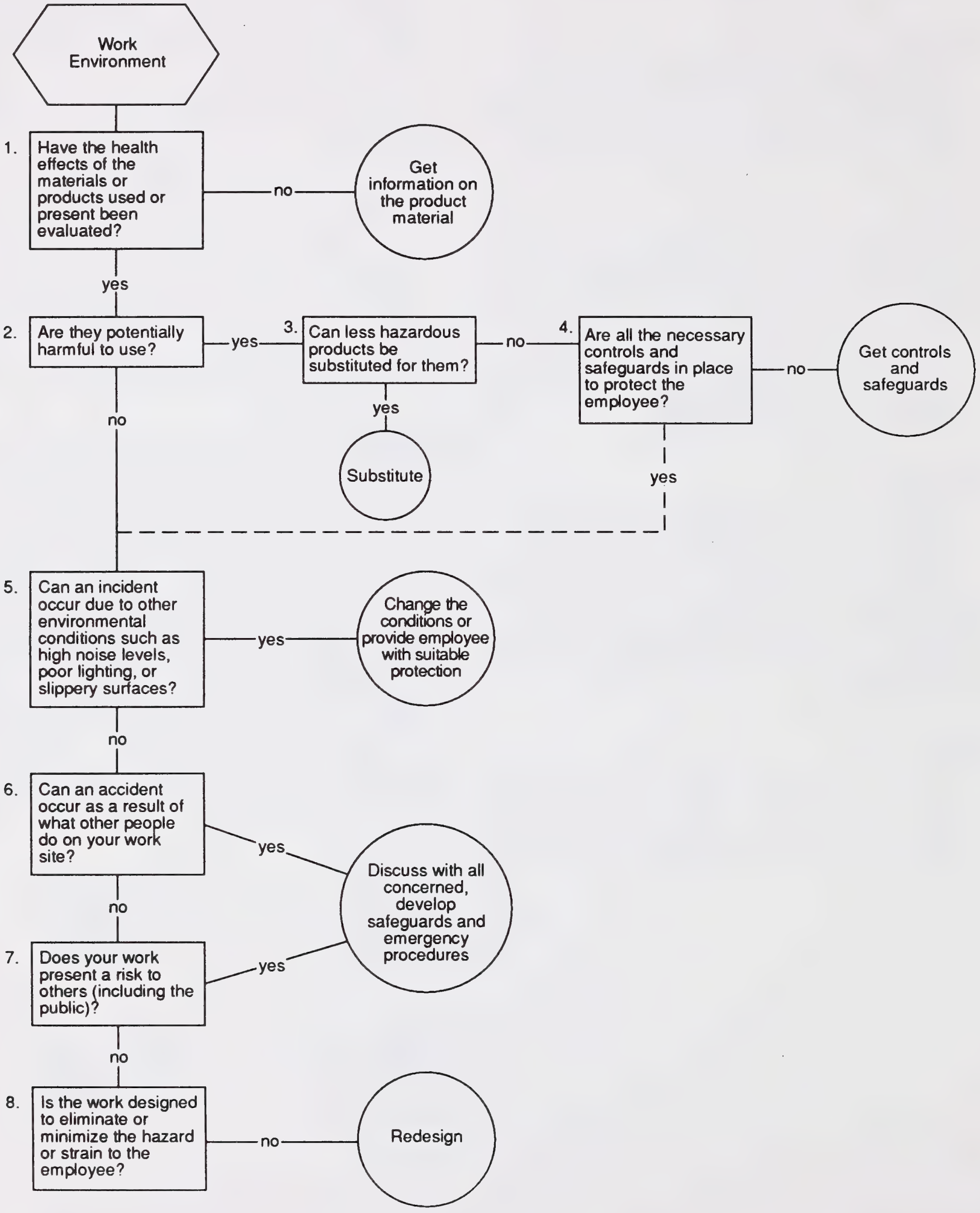
BOX 8

- Many pieces of machinery, tools and equipment have standards for maintenance and inspection. These are usually provided in the form of a manufacturer's manual. Too often these manuals are filed away, never to be seen again. You should take the time to follow the recommendations found in them. They are there for a good reason.

BOX 9

- In spite of the fact that you may have good procedures, equipment and machinery, and trained your employees, there is always the possibility you will have an incident due to human error. There will always be times when the employees forget, their timing is off, or they are simply daydreaming. You must do everything possible to eliminate the chance of losses as a result. For example, if the accidental hitting of the "on" button on a piece of equipment could create an incident, consider recessing the button. This way the equipment can be put into operation only by a deliberate act. Redesign or modify what you can to prevent losses from human error. If nothing can be done, develop emergency procedures.

FLOW CHART 5
INVESTIGATING THE WORK ENVIRONMENT


Work Environment
1. Have the health effects of the materials or products used or present been evaluated?
no
Get information on the product material
yes
2. Are they potentially harmful to use?
yes
3. Can less hazardous products be substituted for them?
no
4. Are all the necessary controls and safeguards in place to protect the employee?
no
Get controls and safeguards
yes
Substitute
no
yes
5. Can an incident occur due to other environmental conditions such as high noise levels, poor lighting, or slippery surfaces?
yes
Change the conditions or provide employee with suitable protection
no
6. Can an accident occur as a result of what other people do on your work site?
yes
Discuss with all concerned, develop safeguards and emergency procedures
no
7. Does your work present a risk to others (including the public)?
yes
no
8. Is the work designed to eliminate or minimize the hazard or strain to the employee?
no
Redesign

FLOW CHART 5: INVESTIGATING THE WORK ENVIRONMENT

BOX 1

- It is important that you and your employees know exactly what you are working with. Many procedures and materials are harmful to health over the short or long term. If the information you need is not clearly outlined on the supplier label and material safety data sheet, contact the manufacturer.

BOX 2, 3 & 4

- If you find that the product or material being used is harmful, you may first want to consider substituting one that is not harmful. This will eliminate the need to install expensive controls such as a ventilation system to remove chemical vapour, or the need for personal protective equipment such as a respirator. If it is not possible to substitute, you must make sure you have provided your employees with the necessary means of protection. This includes such things as personal protective equipment, ventilation, isolation of the person from the area containing the harmful product, or reducing the employees' time of exposure.

BOX 5

- To prevent losses, you must consider all environmental conditions at your work site. You may have all the proper equipment, trained your employees and developed good procedures, but if your employees have to work in a poorly lit area or on slippery surfaces, accidents will still occur. Do what you can to change the poor environmental conditions. If the surface is slippery, change it so that it is not. If this is not possible, make sure your employees wear non-slip footwear.

BOX 6 & 7

- Your employees may have to work with other workers or the public at or very near to the work site. You must consider how this can affect the work or safety of your employees. For example, if your employee is an electrician, they must be aware that the plumber and heating and ventilation contractor may have left some holes cut in the floor. It is not uncommon to find these holes left uncovered for long periods of time. You must also be concerned about how your employees' work will affect other workers or the public. Your employees may be properly equipped and protected from the chemical being used, but are other workers? Is the public? Your procedures must include preventative safeguards and emergency procedures.

BOX 8

- Sometimes the risk of injury to your employees can be eliminated or minimized by simply changing the way the work is done. For example, you may eliminate the risk of back strain to a receiver on the loading dock by making it possible to slide materials onto a conveyor, rather than lift them up onto the conveyor. Look at the way your employees work. A simple redesign may save you a great deal in terms of accidents and will often increase efficiency.

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